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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,656

10/24/2003

Hun-Jun Choo

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MCKENNA LONG & ALDRIDGE LLP
1900 K STREET, NW
WASHINGTON, DC 20006

EXAMINER

CALEY, MICHAEL H

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

02/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/691,656	Applicant(s) CHOO ET AL.	
	Examiner MICHAEL H. CALEY	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/6/04; 8/13/07; 11/21/07</u> . | 6) <input checked="" type="checkbox"/> Other: <u>JP 2000-180808 translation</u> . |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 3-15, and 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishigaki (JP 2000-180808) in view of Stocker et al. (U.S. Patent No. 6,224,459 “Stocker”).

Regarding claims 1, 7, 8, 9, 15, 23, and 24, Nishigaki discloses an apparatus and method of use comprising:

a grinding unit (Figures 1 and 2 element 6) for grinding upper and lower marginal portions of a unit liquid crystal display panel;

a first imaging system (Figures 1 and 2 element 7) for producing images of a ground surface of the upper marginal portion of the unit liquid crystal display panel.

Nishigaki fails to disclose a second imaging system as proposed. Stocker, however, teaches a combination of first and second imaging systems to improve centering and grinding the substrate (Column 8 line 46 – Column 9 line 32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the apparatus to have first and second imaging systems as taught by Stocker. One would have been motivated to form the apparatus to have first and second imaging systems to improve the view of the substrate being worked upon by multiple perspectives (Figure 3) to improve centering and grinding the substrate (Column 3 line 46 - Column 9 line 32).

Regarding claims 3, 10, and 17 limitations describing the liquid crystal display do not further limit the structure of the apparatus for measuring ground amounts of a liquid crystal panel or the method. The examiner takes official notice that such a type of panel is conventional in the art for producing a color display. Further, the proposed apparatus and method may be applied to such a panel.

Regarding claims 4, 11, and 18 Nishigaki as modified by Stocker discloses the first and second imaging systems as provided within the grinding unit (Nishigaki: Figure 1 element 7; Stocker: Figures 1-3).

Regarding claims 5, 12, and 19 Nishigaki as modified by Stocker discloses the first and the second imaging systems as including a CCD (Stocker: Column 9 lines 11-32).

Regarding claim 6, 13, and 20 Nishigaki fails to disclose an alignment mark provided at the marginal portions of the liquid crystal display with which the first and second imaging systems are aligned with the marginal portions of the display. Stocker, however, teaches an alignment mark used for aligning a substrate (Column 5 lines 52-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form an alignment mark on the liquid crystal display and to configure the imaging systems to align with the marginal portions of the display using such a mark. One would have been motivated to align the imaging systems using such a mark as a means of detecting misalignment of the liquid crystal display (Stocker: Column 6 lines 1-4).

Regarding claims 7, 8, 14, 21, and 22 Nishigaki as modified by Stocker discloses the imaging systems as producing images of ground surfaces along the upper and lower marginal portions of the liquid crystal display panel (Stocker: Figure 3).

Claims 2 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishigaki in view of Stocker and in further view of Clark et al. (U.S. Patent No. 6,428,390 "Clark").

Nishigaki discloses a grinding table upon which the unit liquid crystal display panel is loaded (Figure 1 elements 4 and 5), but fails to explicitly disclose a plurality of grinding wheels for grinding the upper and lower marginal portions of the unit liquid crystal panel. Clark, however, teaches a plurality of grinding wheels in a grinding unit (Figure 6 element 25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include multiple grinding wheels in the grinding apparatus. One would have been motivated to include multiple grinding wheels to process opposing sides of the panel simultaneously according to the teachings of Clark (Figure 6).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL H. CALEY whose telephone number is (571)272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael H. Caley/
Primary Examiner, Art Unit 2871